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09/428,322	10/28/1999	MARY LAFUZE COMER	RCA-89541	4518

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EXAMINER

BUGG, GEORGE A

ART UNIT PAPER NUMBER

2613

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 13

Application Number: 09/428,322  
Filing Date: October 28, 1999  
Appellant(s): COMER ET AL.

Ronald H. Kurdyla (Reg. No. 26,932)  
For Appellant

**EXAMINER'S ANSWER**

MAILED  
FEB 26 2004  
Technology Center 2600

This is in response to the appeal brief filed December 15, 2003.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that "claims 1-10 stand as one group, claims 11-17 stand as a second group, and claims 18-24 stand as a third group of claims"

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

5614957

BOYCE et al.

03-1997

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8, 10, and 11-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 5,614,957 to Boyce et al.

3. As for claims 1, 11, and 18, Figure 4, of Boyce, shows a primary decoder (401).

The signals exiting Elements 401, 402, and 403, of Figure 4, will be referred to as resolutions 1, 2, and 3 respectively. In column 18, lines 20-25, the decoder 401 is referred to as a full resolution decoder, and will output an image of resolution 1.

Column 18, Lines 48-53, discloses that the reduced resolution decoder (402) processes only the upper left block of DCT coefficients. This upper left block of DCT coefficients is equivalent to a selected sub-set of frequency domain coefficients, as claimed. Once decoding is complete, a reduced resolution image is displayed, representative of resolution 2. Column 19, Lines 6-12 disclose a motion compensation circuit used in

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conjunction with the PIP decoder of Figure 4. Furthermore, Figure 4 shows an additional reduced resolution decoder (403). The image outputted by 403, will be representative of resolution 3, which is less than that of resolution 1. While Boyce does not specifically teach resolution 3 being greater than resolution 2, Boyce does teach that the PIP arrangement of Figure 4 is not limited to a specific degree of resolution, only that the secondary decoders 402 and 403, be reduced resolution decoders, as compared to 401 (Column 19, Lines 23-30). Therefore, the actual degree of resolution, with respect to resolution 3, can be less than resolution 1, while being greater than resolution 2. It would have been obvious to one of ordinary skill in the art to utilize decoders of varying resolution to achieve greater PIP versatility.

4. Regarding claims 2 and 10, Boyce discloses that secondary pictures (Column 19, Lines 13-20) can be  $\frac{1}{4}$  or  $\frac{1}{2}$  resolution of the primary picture.

5. As for claims 3, 4, 8, and 12 Boyce teaches (Abstract) HDTV/SDTV video decoder, which are synonymous with progressive and inter-laced images.

6. As for claim 5, see Figures 1 and 2 of Boyce.

7. As for claim 13 and 21, up-sampling is shown in the motion compensation circuit of Figures 1 and 2.

8. With regard to claims 14 and 15, Boyce teaches Column 18, Lines 48-53, that the reduced resolution decoder (402) processes only the upper left block of DCT coefficients. This upper left block of DCT coefficients is equivalent to a selected sub-set of spatially distributed pixels, as claimed, based on PIP picture size.

9. The embodiments of claims 16 and 17 are well known in the art. (Official Notice)

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10. As for claims 19 and 20, P frames would be processed exclusively of I and B frames, because they contain the motion information, however all frames are processed.

11. As for claims 22-24, Boyce shows down-sampling up-sampled data in the motion compensation circuit of Figures 1 and 2. Inherently, the residual data of claim 24, is present as a result of down-sampling up-sampled data.

### ***Allowable Subject Matter***

12. Claims 6, 7, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***(11) Response to Argument***

#### ***Appellant's Arguments***

With regard to claims 1-24, Appellant states that Boyce never discloses or suggests operating a decoder for providing an image at a second resolution and a motion compensated unit associated with image-representative pixel values (of the same image) at a third resolution, and Boyce never discloses anything about a third resolution in the context of a main image and the same PIP image data.

#### ***Examiner's Response***

Initially, the Examiner would like to point out that claims 1, 11, and 18 do not recite limitations which require "an image" or "said image" to be construed as the same image throughout, nor does the claim require the third resolution to be part of the main image, or the same PIP image. Figure 4, of Boyce, shows a primary decoder (401). The signals exiting Elements 401, 402, and 403, of Figure 4, will be referred to as resolutions 1, 2, and 3 respectively. In column 18, lines 20-25, the decoder 401 is referred to as a full resolution decoder, and will output an image of resolution 1. Column 18, Lines 48-53, discloses that the reduced resolution decoder (402) processes only the upper left block of DCT coefficients. This upper left block of DCT coefficients is equivalent to a selected sub-set of frequency domain coefficients, as claimed. Once decoding is complete, a reduced resolution image is displayed, representative of resolution 2. Column 19, Lines 6-12 disclose a motion compensation circuit used in conjunction with the PIP decoder of Figure 4. Furthermore, Figure 4 shows an additional reduced resolution decoder (403). The image outputted by 403, will be representative of resolution 3, which is less than that of resolution 1. **It should be pointed out that each decoder, 401, 402, and 403, have their own motion compensation circuits, and the output of each decoder, will inherently affect the PIP processing prior to display. That is to say, the output of 401, combined with the output of 402 and or 403, or any combination thereof, will affect what is displayed, after PIP processing is performed.** While Boyce does not specifically teach resolution 3 being greater than resolution 2, Boyce does teach that the PIP arrangement of Figure 4 is not limited to a specific degree of resolution, only that the

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secondary decoders 402 and 403, be reduced resolution decoders, as compared to 401 (Column 19, Lines 23-30). Therefore, the actual degree of resolution, with respect to resolution 3, can be less than resolution 1, while being greater than resolution 2.

**Furthermore, column 19, lines 13-30, show that decoders 402 and 403 are capable of producing images at  $\frac{1}{4}$  and  $\frac{1}{2}$  the resolution of the main image. It is therefore shown by Boyce that the reduced resolution images can have varied resolutions, and that a third resolution less than a first resolution and greater than a second resolution can be achieved. Clearly one skilled in the art would recognize that Boyce has disclosed 3 decoders of which 2 are at reduced resolutions. Boyce teaches in column 19, lines 23-29 that the “resolution” of each decoder(s) should not be limited to the  $\frac{1}{4}$  and  $\frac{1}{2}$  embodiments. This would suggest that one of ordinary skill could make the PIP display any resolution desired, including different resolutions for each (i.e.  $\frac{1}{4}$  and  $\frac{1}{2}$ .) Moreover, Boyce could be interpreted as specifically teaching this by referring to the secondary “decoder” (not plural).**


For the above reasons, it is believed that the rejections should be sustained.



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Respectfully submitted,

George A Bugg   
Examiner  
Art Unit 2613


GAB

February 23, 2004

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